



Name: _____
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Geometry, Period _____
Due Date: _____

HW 76_Factoring Coefficients >1

**Geometry
Homework**

Find the roots. (-b term, +c term)

1) $x^2 - 7x + 10 = 0$

Handwritten solution for problem 1:

x^2	$-5x$
$-2x$	$+10$

Factors: $(x-5)(x-2) = 0$

Roots: $x-5=0 \Rightarrow x=5$, $x-2=0 \Rightarrow x=2$

Solution set: $x = \{2, 5\}$

2) $b^2 - 12b + 35 = 0$

3) $x^2 - 10x + 21 = 0$

4) $x^2 - 8x + 12 = 0$

5) $a^2 - 8a + 15 = 0$

6) $b^2 - 12b + 32 = 0$

Find the zeros. (+b term, -c term)

7) $b^2 + 3b - 10 = 0$

Handwritten solution for problem 7:

b^2	$+5b$
$-2b$	-10

Factors: $(b+5)(b-2) = 0$

Roots: $b+5=0 \Rightarrow b=-5$, $b-2=0 \Rightarrow b=2$

Solution set: $b = \{-5, 2\}$

8) $x^2 + 3x - 4 = 0$

9) $m^2 + 2m - 48 = 0$

10) $m^2 + 3m - 40 = 0$

11) $b^2 + 3b - 18 = 0$

12) $v^2 + 5v - 24 = 0$

Factor each completely.

13) $4x^2 + 16x + 15$

Handwritten work shows a box method for factoring. The top row contains $4x^2$ and $+6x$, and the bottom row contains $+10x$ and 15 . A diagonal line is drawn from the top-left to the bottom-right. The factors $(2x+3)$ and $(2x+5)$ are written above and below the box respectively. The numbers 1, 4 and 2, 2 are written to the left of the top row, and 1, 15 and 3, 5 are written to the right of the bottom row.

Handwritten work shows the factored form: $(2x+3)(2x+5)$. The numbers 1, 4 and 2, 2 are written to the right of the expression.

14) $4v^2 + 11v + 6$

Handwritten work shows a box method for factoring. The top row contains $4v^2$ and an empty space, and the bottom row contains an empty space and $+6$. The numbers 1, 4 and 2, 2 are written to the left of the top row, and 1, 6 and 2, 3 are written to the right of the bottom row.

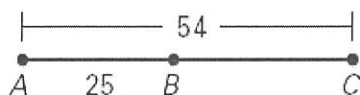
15) $4n^2 + 13n + 10$

16) $5m^2 + 29m + 20$

17) $5v^2 + 8v + 3$

18) $3k^2 + 14k + 8$

19) Find line segment BC



20) If line segment AC is 35 units, what is the value of line segment MC?

